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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,906	06/20/2003	Jerome M. Verbeke	5681-65900	9206

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EXAMINER

CAO, DIEM K

ART UNIT	PAPER NUMBER
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2194

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/600,906	VERBEKE ET AL.	
	Examiner	Art Unit	
	Diem K. Cao	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 June 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-68 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 5/31/05, 7/3/06, 9/25/06.



WILLIAM THOMSON
 SUPERVISORY PATENT EXAMINER

- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

1. Claims 1-68 are presented for examination.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 52-68 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to a signal directly or indirectly by claiming a medium and the Specification recites evidence where the computer readable medium is define as a “*wave*” (such as a carrier wave). In that event, the claims are directed to a form of energy which at present the office feels does not fall into a category of invention. See MPEP 2107.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-8, 10-13, 16, 34-59, 61-64 and 67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajayya (U.S. 6,125,402) in view of Venners (Inside the Java Virtual Machine).**

As to claim 1, Nagarajayya teaches a system (general purpose computer system; col. 11, lines 5-6) comprising a processor (CPU; col. 11, lines 7-8), and a memory comprising program instructions (ROM/RAM ... instructions and data; col. 11, lines 10-13), wherein the program instructions are executable by the processor to implement a remote class loader mechanism configured to determine that a class is needed to execute code on the system (The program determines if the applet needs other classes to run that are not available in the subset of classes downloaded; col. 9, lines 27-30), obtain the class from a remote system via a network (they are dynamically loaded from the class libraries on the Web server; col. 9, lines 41-42), and store the class in a location on the system (inherent from the class is loaded and executed on the client machine; col. 9, lines 41-42. Thus, the classes have to be stored on the system.).

Nagarajayya does not teach the location indicated by a class path of a default class loader. However, Venners teaches the location indicated by a class path of a default class loader (The class loader ... each class loader; chapter 3, page 4 and page 6, last paragraph). Also see chapter 5, pages 10-11.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Venners to the system of Nagarajayya to understand how a Java applet load and utilize classes that are needed at runtime.

As to claim 2, Venners teaches the default class loader is configured to locate the class stored in the location indicated by the class path, and load the class from the location for access

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by the code (The bootstrap class loader ... CLASSPATH; chapter 5, page 11, section The Bootstrap Class Loader).

As to claim 3, Venners teaches the location is a default directory for storing remote classes (The class loader ... each class loader; chapter 3, page 4 and page 6).

As to claim 4, Venners teaches the location is a user-specified directory for storing remote classes (user-defined directory path; chapter 5, page 11, section "The Bootstrap Class Loader").

As to claim 5, Venners teaches to determine that a class is needed to execute code on the system, the remote class loader mechanism is further configured to detect an exception generated by the code and indicating that the class is not on the system (ClassNotFoundException; chapter 5, pages 11-12, section "User-Defined Class Loaders").

As to claim 6, Nagarajayya as modified by Venners teaches to obtain the class from a remote system, the remote class loader mechanism is further configured to send a message requesting the class to one or more remote systems, wherein the message comprises information about the class for identifying a class file on the remote system that comprises the requested class (inherent from the browser can load classes needed by the applet from the server; col. 10, lines 6-12. Thus, the browser/applet need to send request to the server and indicate which classes are

needed). Also see Venners - network class loader, downloading it across the network; chapter 3, page 7.

As to claim 7, Nagarajayya teaches to obtain the class from a remote system, the remote class loader mechanism is further configured to send a message requesting the class to the remote system, and receive the class from the remote system in one or more messages in response to the message (inherent from the browser can load classes needed by the applet from the server; col. 10, lines 6-12. Thus, the browser/applet need to send request to the server and indicate which classes are needed).

As to claim 8, Nagarajayya teaches to obtain the class from a remote system, the remote class loader mechanism is further configured to broadcast a message requesting the class to one or more remote systems including the remote system on the network, and receive the class from the remote system in one or more messages in response to the broadcast message (inherent from the browser can load classes needed by the applet from the server; col. 10, lines 6-12. Thus, the browser/applet need to send request to the server and indicate which classes are needed).

As to claim 10, Nagarajayya teaches the program instructions are further executable by the processor to implement a virtual machine on the system, wherein the code is executable within the virtual machine (Java Virtual Machine; col. 2, lines 61-63).

As to claim 11, Nagarajayya teaches the virtual machine is a Java Virtual Machine (Java Virtual Machine; col. 2, lines 61-63).

As to claim 12, Nagarajayya teaches the code is in a bytecode computer language (Java applet; col. 4, lines 38-39).

As to claim 13, Nagarajayya teaches the code is Java code (Java language code; col. 4, lines 38-39).

As to claim 16, Nagarajayya teaches the code a code fragment of an application configured for execution on the system, and wherein the remote system is a node in a distributed computing framework that comprises the application and is configured to provide computer-executable code fragments of the application to two or more other systems to run the code fragments in parallel to execute the application (abstract and col. 2, lines 8-30).

As to claim 34, see rejection of claim 1 above.

As to claim 35, it is the same as the system claim of claim 1 except it is a method claim, and is rejected under the same ground of rejection.

As to claims 53-59, 61-64 and 67, see rejections of claims 2-8, 10-13 and 16 above.

5. Claims 9, 14, 15, 17-33, 60, 65, 66 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagarajayya (U.S. 6,125,402) in view of Venners (Inside the Java Virtual Machine) further in view of Babaoglu et al. (Anthill: A Framework for the Development of Agent-Based Peer-to-Peer Systems).

As to claim 9, Nagarajayya does not teach the one or more remote systems and the system are member peers of a peer group in a peer-to-peer network environment. However, Babaoglu teaches peer-to-peer application can be implemented in Java (page 7, section 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Babaoglu to the system of Nagarajayya because it presents a framework supporting anew approach for building P2P application in which resource can be sharing by direct exchange between peer nodes.

As to claim 14, see rejection of claim 9 above.

As to claim 15, Nagarajayya does not teach the system and the remote system are configured to participate as peer nodes in a peer-to-peer platform protocols for enabling the peer nodes to discover each other, communicate with each other, and cooperate with each other to form peer groups in the peer-to-peer environment. However, Babaoglu teaches peer-to-peer application can be implemented in Java (page 7, section 4).

As to claim 17, Nagarajayya teaches the system and the remote system are configured to participate in a distributed computing system on the network. Nagarajayya does not teach submitting computational tasks in a distributed heterogeneous networked environment that utilizes peer groups to decentralize task dispatching and post-processing functions and enables a plurality of jobs to be managed and run simultaneously. However, Babaoglu teaches peer-to-peer application can be implemented in Java (page 7, section 4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the teaching of Babaoglu to the system of Nagarajayya because it presents a framework supporting anew approach for building P2P application in which resource can be sharing by direct exchange between peer nodes.

As to claim 18, see rejections of claim 1 and 17 above.

As to claims 19-33, see rejections of claims 2-17 above.

As to claim 60, see rejection of claim 9 above.

As to claims 65-66, see rejection of claims 14-15 above.

As to claim 68, see rejection of claim 17 above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Diem K. Cao whose telephone number is (571) 272-3760. The examiner can normally be reached on Monday - Friday, 7:30AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Thomson can be reached on (571) 272-3718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DC
January 5, 2007

William Thomson
WILLIAM THOMSON
SUPERVISORY PATENT EXAMINER